

**DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

DNA POLYMERASES WITH ENHANCED LENGTH OF PRIMER EXTENSION

the specification of which:

(check one)

- [X] is attached hereto  
[ ] was filed on \_\_\_\_\_ as Application Serial No. \_\_\_\_\_, and was amended on \_\_\_\_\_.  
[ ] was described and claimed in PCT International Application No. \_\_\_\_\_, filed on \_\_\_\_\_ and as amended under PCT Article 19 on \_\_\_\_\_, if any.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a) - (d) or §365(b) of any foreign application for patent or inventor's certificate, or §365(a) of any PCT application which designates at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Priority Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)

Priority Not Claimed

ANY FOREIGN APPLICATION(S), ON THE SAME SUBJECT MATTER WHICH HAS A FILING DATE EARLIER THAN THE EARLIEST APPLICATION FROM WHICH PRIORITY IS CLAIMED

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)
-------------------	--------------------	---------------------------------

**CLAIM FOR BENEFIT OF PROVISIONAL APPLICATION(S)**

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

_____ (Application Number)	_____ (Filing Date)
_____ (Application Number)	_____ (Filing Date)

**CLAIM FOR BENEFIT OF EARLIER U.S. APPLICATION(S) UNDER 35 U.S.C. 120**

(complete this part only if this is a divisional,  
continuation or CIP application)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s), or §365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

<u>5,436,149</u>	<u>2/19/93</u>	<u>patented</u>
(Serial No.)	(Filing Date)	(Status: patented, pending, abandoned)
<u>08/483,535</u>	<u>6/7/95</u>	<u>pending</u>
(Serial No.)	(Filing Date)	(Status: patented, pending, abandoned)

POWER OF ATTORNEY

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Irving Powers (15,700), Donald G. Leavitt (17,626), John K. Roedel, Jr. (25,914), Michael E. Godar (28,416), Edward J. Hejlek (31,525), William E. Lahey (26,757), Richard G. Heywood (18,224), Frank R. Agovino (27,416), Kurt F. James (33,716), G. Harley Blosser (33,650), Paul I. J. Fleischut (35,513), Vincent M. Keil (36,838), Robert M. Evans, Jr. (36,794), Robert M. Bain (36,736), Kathleen M. Petrillo (35,076), Rudolph A. Telscher, Jr. (36,032), Paul A. Stone (38,628), Cindy S. Kaplan (40,043), David E. Crawford, Jr. (38,118), Paul A. Maddock (37,877), Charles E. Cohen (34,565), Scott A. Williams (39,876), and Richard L. Bridge (P-40529).

Send Correspondence To:

Direct Telephone Calls To:

Customer Number: 000321

G. Harley Blosser  
(314) 231-5400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Wayne M. Barnes

Inventor's signature Wayne M. Barnes

Date 9/12/97

Residence 223 Renaldo Drive

Citizenship US

Post Office address Chesterfield, Missouri, 63017

Full name of second joint inventor \_\_\_\_\_

Second inventor's signature \_\_\_\_\_

Date \_\_\_\_\_

Residence \_\_\_\_\_

Citizenship \_\_\_\_\_

Post Office address \_\_\_\_\_

ASSIGNMENT

WHEREAS, I, Wayne M. Barnes of Chesterfield, Missouri 63017 have invented an improvement in DNA POLYMERASES WITH ENHANCED LENGTH OF PRIMER EXTENSION (file TKR 2050) and have executed an application for a United States patent based thereon Serial Number 08/931,818 filed September 16, 1997;

AND, WHEREAS, Takara Shuzo Co., Ltd. of Otsu, Shiga, Japan, a corporation (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring certain rights thereunder;

NOW, THEREFORE, for one dollar and other good and valuable consideration, receipt of all of which is hereby acknowledged, I have agreed to and do hereby sell, assign, and transfer unto said ASSIGNEE the entire right, title, and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said invention, said United States application, any other United States applications (including divisional, continuing or reissue applications) based in whole or in part on said United States application or in whole or in part on said invention, any foreign applications based in whole or in part on any of the aforesaid United States applications or in whole or in part on said invention, and any and all patents (including extensions thereof) of any country which have been or may be granted on any of the aforesaid applications or on said invention or any part thereof;

TO BE HELD AND ENJOYED by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been

09981002-101701

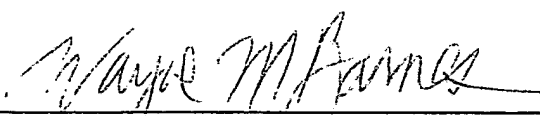
held and enjoyed by me had no sale and assignment of said interest been made;

AND I hereby authorize and request the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon said United States applications or any of them, or upon said invention or any part thereof, to said ASSIGNEE;

AND I hereby agree for myself and for my heirs, executors and administrators, to execute without further consideration any further lawful documents and any further assurances; and any divisional, continuing, reissue, or other applications for patents of any country, that may be deemed necessary by said ASSIGNEE fully to secure to said ASSIGNEE its interest as aforesaid in and to said invention or any part thereof, and in and to said several patents or any of them;

AND I hereby covenant for myself and my legal representatives, and agree with said ASSIGNEE, its successors and assigns, that I have granted no right or license to make, use or sell said invention, to anyone except said ASSIGNEE, that prior to the execution of this deed my right, title, and interest in said invention had not been otherwise encumbered, and that I have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, I have hereunto set my hand.

  
Wayne M. Barnes

ACKNOWLEDGEMENT

STATE OF Missouri)

COUNTY OF St. Louis City)

December

On this 24th day of ~~October~~, 1997 before me,  
Brenda C. Witschorek, a Notary Public, personally appeared Wayne  
M. Barnes to me known to be the person described in and who  
executed the foregoing assignment and acknowledged that he  
executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and  
seal the date and year last above written.

Brenda C. Witschorek  
Notary Public

My Commission Expires:

BREND A C WITSCHOREK  
NOTARY PUBLIC  
MISSOURI  
GHB/dl1 10/3/98

09981002-101701  
T02F0T-200T8650

Express Mail No. EL 89072 5 US  
TKR 2050.1



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

FEBRUARY 07, 1998

PTAS

SENNIGER, POWERS, LEAVITT & ROEDEL  
G. HARLEY BLOSSER, ESQ.  
ONE METROPOLITAN SQUARE  
16TH FLOOR  
ST. LOUIS, MO 63102



\*100596606A\*

TKR 2050  
GHB/EHG  
183

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/12/1997

REEL/FRAME: 8954/0683  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
BARNES, WAYNE M. ✓

DOC DATE: 12/08/1997

ASSIGNEE:  
TAKARA SHUZO CO., LTD. ✓  
SETA 3-4-1  
CENTRAL RESEARCH LABORATORIES  
OTSU, SHIGA, JAPAN 520-21

SERIAL NUMBER: 08931818 ✓  
PATENT NUMBER:

FILING DATE: 09/16/1997 ✓  
ISSUE DATE:

ANTIONE ROYALL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

2  
24

COI

12-31-1997

JET

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeRECEIVED  
DEC 12 1997

Tab settings = = = ▼



100596606

d original documents or copy thereof.

To the Honorable Commissioner of Patent

## 1. Name of conveying party(ies):

Wayne M. Barnes

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_

Execution Date: \_\_\_\_\_

MRD 12-12-97

## 2. Name and address of receiving party(ies)

Name: Takara Shuzo Co., Ltd.

Internal Address: Central Research Laboratories

Seta, 4

Street Address: Seta 3-4-1

Otsu, Shiga, 520-21 JAPAN

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

## A. Patent Application No.(s)

Ser. No. 08/931,818 (filed 9/16/97)

## B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: G. Harley Blosser, Esq.

Internal Address: Senniger, Powers, Leavitt  
& Roedel

Street Address: One Metropolitan Square

16th Floor

City: St. Louis State: MO ZIP: 63102

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40.00 E

☒ Enclosed☐ Authorized to be charged to deposit account

## 8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

G. Harley Blosser

Name of Person Signing

Signature

12/8/97

Date

Total number of pages including cover sheet, attachments, and document: 608931118  
40.00  
08900036  
12/31/97  
01 FC:81